

Location of Wireless Nodes Using Signal Strength Weighting Metric

Abstract of the Disclosure

[0068] Methods, apparatuses, and systems directed to a wireless node location mechanism that uses a signal strength weighting metric to improve the accuracy of estimating the location of a wireless node based on signals detected among a plurality of radio transceivers. In certain implementations, the wireless node location mechanism further incorporates a differential signal strength metric to reduce the errors caused by variations in wireless node transmit power, errors in signal strength detection, and/or direction-dependent path loss. As opposed to using the absolute signal strength or power of an RF signal transmitted by a wireless node, implementations of the present invention compare the differences between signal strength values detected at various pairs of radio receivers to corresponding differences characterized in a model of the RF environment. One implementation of the invention searches for the locations in the model between each pair of radio receivers where their signal strength is different by an observed amount.